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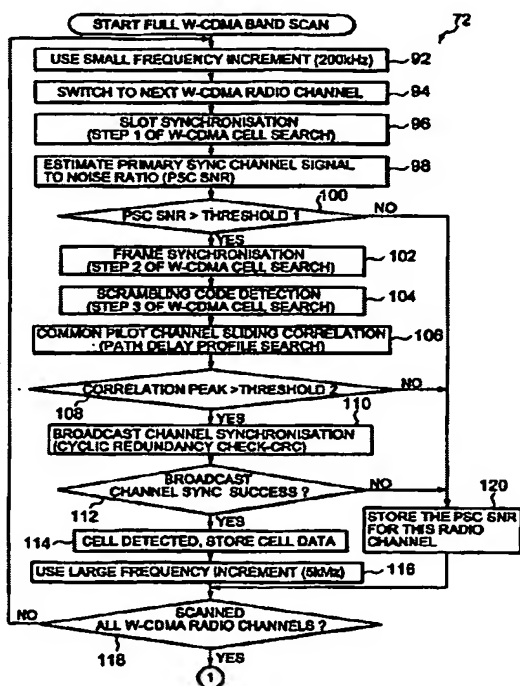
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(54) Title: **CELL SEARCH PROCESS FOR WIRELESS COMMUNICATION SYSTEM**



(57) Abstract: A method of cell search in a wireless communication systems having a plurality of base stations and a mobile station, each of the plurality of base stations serving a separate cell within a service area and transmitting a common primary synchronisation code (PSC) in a primary synchronisation channel within a slot of a radio frame, the method including the steps of: (a) scanning (72) through radio channels in scanning increments corresponding to a standard channel raster; (b) estimating (98) the PSC signal-to-noise ratio of each radio channel; (c) if a PSC signal-to-noise ratio is above a first predetermined threshold level (100), completing a cell search procedure including slot synchronisation, frame synchronisation and scrambling code detection steps for that radio channel; (d) if the cell search procedure is successfully completed (112) for the radio channel in step (c), increasing the scanning increments to the broadcast frequency separation between cells; (e) when all radio channels are scanned in step (d), sorting (74) the scanned radio channels in descending order by PSC signal-to-noise ratio; and (f) performing (76) the cell search procedure on each sorted radio channel in descending order.

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WO 2004/114539 A1